

On the Status of *Rhacophorus prasinatus* Mou, Risch, and Lue
(Anura: Rhacophoridae)

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FIG. 1. The species of *Polypedates* and *Rhacophorus* on Taiwan: *P. megacehalus* (upper left), *R. taipeianus* (upper right), *R. moltrechti* (lower left), *P. prasinatus* (lower right).

The emerald tree frog, *Rhacophorus prasinatus* Mou, Risch and Lue, 1983 (= *R. smaragdinus* Lue and Mou, 1983), has had an uncertain taxonomic status. When first described, it was thought to be closely related to *R. chenfui*, currently placed in *Polypedates* (Jiang, Hu and Zhao, 1987), on morphological grounds and to *P. leucomystax* on account of genetic similarity. Having examined the external physical structure, muscular structure and

stained skeletons of specimens from the type locality, I conclude that this species should be classified in *Polypedates* in accordance with the definitions and criteria set forth by Liem (1970) and Jian et al. (1987) to distinguish the genera *Rhacophorus* and *Polypedates*. The following are the key features observed:

Dermal fold along outer edges of forearm and above anus in rows of

tubercles, tarsal fold not evident or absent. Fingers half webbed; web of all toes except the fourth extending beyond subarticular tubercles; fourth toe webbed to middle subarticular tubercle or somewhat beyond. Dorsal view of intercalary cartilage heart-shaped. Esophageal and lateral processes of laryngeal apparatus present. M. extensor radialis accessorius lateralis moderately large, originating along lateral side of humerus and inserting on the disto-dorsal end of radio-ulna; M. extensor brevis superficialis of the first digit present. Vomerine teeth present. Parieto-squamosal arch of the fronto-parietal bone absent. Vertebral column procoelous.

Polypedates prasinatus (Mou, Risch and Lue 1983) comb. nov.

Rhacophorus prasinatus Mou, Risch and Lue, 1983;

Rhacophorus smaragdinus Lue and

Mou, 1983

The two junior synonyms share the same holotype and bear the same publication year. However, the *Rhacophorus prasinatus* has priority. It was published on 30 December 1983 in *Alytes* 2(4) which was mailed on that date, as indicated in the journal. Although *R. smaragdinus* has the same publication date in the Journal of Taiwan Museum 36(2), I have learned from the editor, S. F. Hung, that the mailing date of this issue was 17 January 1984. This supports a previous arbitrary adoption of the first junior synonym (Frost, 1985).

In general, *Polypedates* and *Rhacophorus* species can be distinguished from the other treefrogs by the Y-shaped terminal phalanx and absence of anterior horns of the hyoid (Liem, 1970). The species in Taiwan (Fig. 1) can be distinguished by the following key:

Key To Species Of *Polypedates* And *Rhacophorus* Of Taiwan

- 1a. Dermal fold along the forearm absent or in rows of tubercles; tarsal fold not evident or absent..... (*Polypedates*)
- 2a. Skin shagreened, ground color green above; supratympanic fold yellowish brown anteriorly *P. prasinatus*
- 2b. Skin smooth, ground color light brown or brown, usually with dark spots or stripes *P. megacehalus*
- 1b. Dermal fold along the forearm and tarsus present (*Rhacophorus*)
- 3a. Skin smooth, with black spots or blotches on flanks and inner side of thighs..... *R. moltrechti*
- 3b. Skin shagreened to granulated, with fine dark dots on inner side of thighs..... *R. taipeianus*

These two genera in Taiwan also exhibit different reproductive modes. Both *Polypedates* species usually deposit foamy masses suspended on low tree branches overhanging pools or on cistern walls above the water. Egg masses become light brown when the outer foamy substance dries. In contrast, *Rhacophorus* species deposit foamy egg masses near puddles in holes burrowed by the males or beneath soil or fallen leaves.

Specimens examined: NMNS 01455-01459, 18 specimens.

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